

**Alaska Energy Authority & Denali Commission  
Emerging Energy Technology Fund Progress Report**

**Grant Number:** 74310049

**Project Title:** Small Community Self Regulating Grid – Tuntutuliak

**Grantee:** Intelligent Energy Systems

**Reporting Period:** July 1, 2013 to September 30, 2013

**Deliverables Submitted:** No current deliverables within milestones. Milestones 2 through 6 in various stages of progress.

**Budget:** Project remains on budget and completable as proposed. No reimbursements requested during this reporting period. Reflected in financial progress report. Total expenditures reported to date are \$155,783.17.

**Schedule Status:** Single controller testing awaiting final report from UAF INE. It's been determined that a revision to the milestone schedule and budget total needs to occur to complete the project in the best and most efficient manner. Revisions to be submitted to AEA for review and approval during next reporting period – by January 31, 2014.

**Percent Complete:** 25% project completion overall.

Miles tone	Task		Deliverables	Progress Status
	1	Purchase components for controller upgrades and software license		100% Complete
	2	Complete controller programming for prototype		75% Complete
	3	Test single ETS unit controller for frequency response at ACEP test facility	ACEP test results	In progress, awaiting final report from UAF/INE
	4	Develop system instrumentation plan	Instrumentation plan	50% complete
	5	Baseline data collection and system modeling	System one line, estimated installation costs	25% complete
	6	Economic analysis on stove consumption	Economic analysis	In progress with ISER
	7	Purchase 3-phase load balancing unit (boiler)		
	8	Purchase remaining advanced controller components and instrumentation		
	9	Install instrumentation, ETS controller upgrades, and phase-balancing boiler.	Commissioning report installations	
	10	Monitor system in centralized and distributed frequency controls modes and optimize system efficiency		

	11	Data evaluation and draft project report	Draft project report	
	12	Final project report	Final report	

**Work Progress:** ETS test unit delivered to UAF INE and frequency response evaluation testing performed. Awaiting final report summary from test lab. Data collection components procured and delivered to site. Preliminary meetings were held to establish work plan for economic analysis reports.

**Future Work:** Installation of monitoring equipment, baseline power quality studies and implementation of data collection and reporting system is proposed for completion by March 31, 2014.

Submittal and review of revised milestone and budget categories, to total same funding amount and project outcomes.

Project remains on budget with no significant problems foreseen. Slight delay of milestones dependent on contractor availability. No freight delivery issues due to barge and transportation schedules.